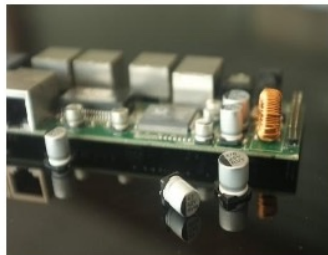


AISHI Aluminium Cap M-Lead Type vs V-Chip Type

- Cost Savings
- Long Life
- Better Solderability
- 16V-450V
- Available Series: MA, MF, MH, MK

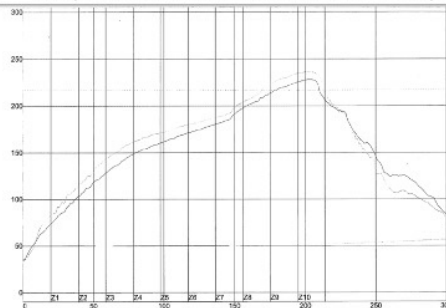
Advantage of better Solder-Reflow Ability and lower cold soldering rate

M-Lead vs V-Chip



✓ M-Lead type SMD Al cap is a lower reflow temperature, which improved the solder quality, lowers the cold soldering rate and easier to be reworked.

Comparison data of Reflow chart of Al Can Temp.



Temp. of Can	V-Chip	M-Lead
Max °C	236.67	228.06
Solder-Reflow Ability	Good	Excellent

Extend the Lifetime of Al cap by M-Lead

Application Analysis of LED Lighting



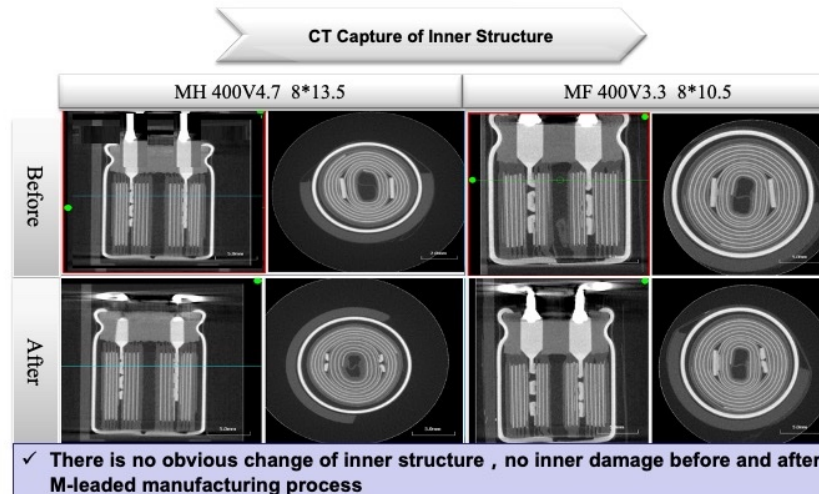
12W 25°C	Test Point(°C)	0.5H	1H	2H	3H
M-Lead SMD	Top	93.2	94.6	94.5	94.6
	Side	97.1	98.5	98.4	98.5
V-Chip SMD	Top	101.9	103.6	103.7	103.8
	Side	104.4	106.1	106.2	106.3

$$L_x = L_o \times 2^{(T_o - T_x)/10} \times 2^{(\Delta T_o - \Delta T_x)/5}$$

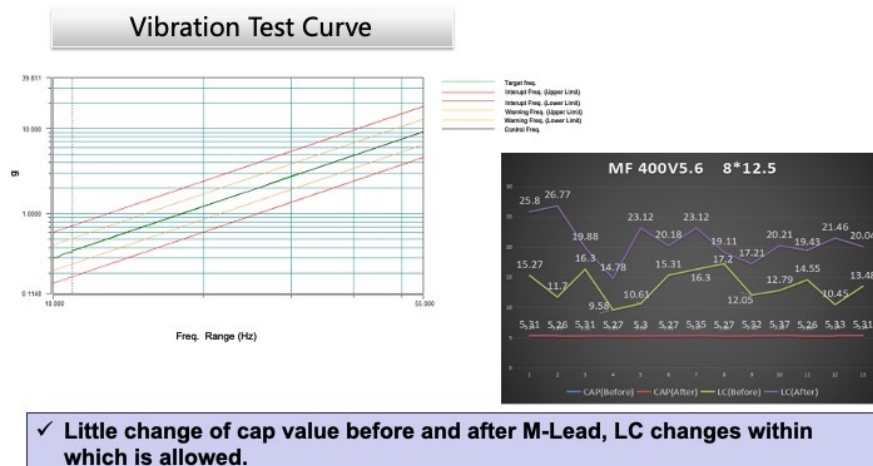
Series	WV(V)	Cap Value (uF)	Diameter (mm)	Electric Parameter Height (mm)	Lo Rated Lifetime(H)	Io Rated RC (mA)	To Rated Temp. (°C)	Temp. Tc(Al Can)	Temp. Tx(Ambient)	Temp. Rise	Lifetime Calculation Lx(hrs)	Lx(year)
MF SMD	400	3.3	8	10.5	6000	72	105	103.8	103.45	0.39	12666	1.45
MF M-leaded	400	3.3	8	10.5	6000	72	105	94.6	94.25	0.39	23965	2.74

✓ When using on al-based PCB, temp. on M-Lead type Al cap will be 5 - 8 °C in average, which will lead to longer lifetime of M-Lead type.

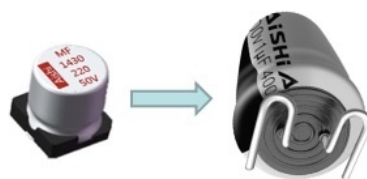
Inner Structure comparison before and after M-led



Vibration comparison data before and after M-lead



Characteristics Summary between M-led and V-Chip



Item	V-Chip	M-Leaded
Cost	higher	Lower
Electrical Performance	Excellent	Excellent
Manufacturing Process	Forming by radial Plate Tape and Reel	Forming by radial Tape and Reel
Lifetime	Normal	Longer
Cold Soldering	Normal	Lower
Rework	Hard	Easy
Ripple Current	High	High